Utah Network for Electronic Public Health Information - Privacy and Security

Interoperable Solutions for Health Information Exchange:

Advancing e-Health in Utah.

A report of the Implementation Plan Workgroup.

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Submitted by:

Lois Haggard, PhD, Project Director
Utah Department of Health
P O Box 14201
Salt Lake City, UT 84111

Submitted to:

Cynthia Irvin, PhD, State Liaison
Privacy and Security Solutions for
Interoperable Health Information Exchange
Research Triangle Institute
PO Box 12194
3040 Cornwallis Rd
Research Triangle Park, NC

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The Utah Department of Health Utah Network for Electronic Public Health Information Privacy and Security (Unify-PS) Project expresses its gratitude for the assistance, time and effort of the individuals and organizations that participated in the Project Work Groups and survey process. Participants' voluntary time and input has been critical to identifying and documenting the privacy and security concerns in health information exchange and accomplishing the project objectives.

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Questions or comments regarding this report should be directed to:

Francesca Garcia Lanier, Project Coordinator
Utah Unify-PS
Utah Department of Health
348 East 4500 South
Salt Lake City, UT 84107

Email: flanier@utah.gov
Telephone: 801.892.6649

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INTERIM IMPLEMENTATION PLAN

I. Background

Different patient care needs and interpretations of Health Insurance Portability and Accountability Act (HIPAA) have generated variations in business practices and policies across healthcare organizations that sometimes work to inhibit exchange of clinical information. The Health Information Security and Privacy Collaboration was established to assess how organizational business policies, practices, and state laws regarding privacy and security affect electronic health information exchange. The Agency for Healthcare Research and Quality-and the National Governor's Association have contracted with Research Triangle Institute to engage states in a national dialogue designed to identify business practices and state statutes that will facilitate safe and secure exchange of personal health information, both within and across states. Utah was awarded one of the subcontracts to participate in this dialogue, along with 32 other states and Puerto Rico.

Project staff used a nationally standardized process to collect information from 77 Utah stakeholders (e.g., hospitals, physicians, pharmacies, laboratories, payers, law enforcement, Emergency Medical Services, state agencies, public health and consumers), and convened four workgroups. The variations workgroup (chaired by John Nelson, MD, HealthInsight) vetted the information, organized it into over 150 discrete organizational practices, and identified practices that presented barriers to information exchange. A legal workgroup (chaired by Lyle Odendahl, Utah Attorney General's Office) explored legal bases for barrier practices. The solutions workgroup (chaired by Linn Baker, Public Employees Health Plan) proposed Administrative, Educational, Technological, and Regulatory solutions to overcome existing barriers. An Implementation workgroup (chaired by Barry Nangle, PhD, Utah Department of Health) has identified mechanisms and next steps for implementation of the proposed solutions.

The Utah Digital Health Services Commission (UDHSC), chaired by Joseph Cramer, MD, provides project oversight. The UDHSC is a Governor-appointed public-private sector commission dedicated to improving healthcare in Utah.

This report is the third project report. It was preceded by the Assessment of Variations Report, and the Solutions Report. Those reports are available on the UNIFY-PS Website (http://health.utah.gov/unify/unify-ps.htm). The purpose of this report is to document practical approaches and actionable steps to continue the dialogue regarding interoperable health information exchange in Utah.

Key assumptions. The following assumptions have been made with regard to achieving electronic interoperability of health records.

Value. Hospitals, physicians, payers and consumers stand to gain by participation and adoption of electronic health information technology. Engage stakeholder groups in the development process.

User-driven. Those that use the technology drive development and widespread adoption. This likely is the physicians, hospitals, and payers and not the consumer. However, careful consideration must be given to address consumer concern regarding the privacy and/or security risks.

Public/private participation. Public/private collaboration is necessary to make the kind of progress required for industry-wide adoption of information technology standards.

Leadership is essential. Government can work with industry but industry must be engaged to drive the solution. The state is a payer and, as one of the largest employers, a purchaser of insurance coverage and benefits directly from widespread adoption of health technology. Government should provide leadership.

> *"It's not good enough for the federal government to just decide on a method and implement it, because we may decide on the wrong thing. We have to bring the private sector into this process."*[1]
>
> *-Mike Leavitt, HHS Secretary*

Policy matters. Government plays a critical role in setting policy to facilitate the appropriate development and adoption of standards to maintain the privacy and security of health information in a growing

electronic environment. As e-Health grows, technology and management strategy choices are increasingly tied to the political, social and regulatory environments in which e-Health operates. These policy environments are complex and evolving, and their effect on electronic enterprise is real.

Challenges. The challenges for Utah include overcoming competing stakeholder agendas and priorities and maintaining stakeholder interest over the extended time period necessary to achieve secure interoperable health information exchange.

II. Summary of Interim Analysis of Solutions Report

Utah stakeholders identified administrative, educational, technical and regulatory challenges to advancing a system of interoperable electronic health information exchange. Solutions are summarized here; for a complete description, see: *Interoperable solutions for health information exchange: An interim summary of solutions to advance e-health in Utah*.

Administrative. The recommended administrative solutions address primarily inter- and intra-agency sharing of information in public health. For instance, cooperation among Utah Department of Health (UDOH) programs and between UDOH and law enforcement or physicians when necessary.

Cross program data sharing within the UDOH is limited as staff tend to be more protective of health information and data systems are mostly singular information silos supported by categorical funding. While some sharing across programs exists and formal policy supports appropriate sharing, the culture within the agency tends towards that of protection over sharing. The SWG recommendation was that the UDOH improve intra-agency sharing of health information, where appropriate, to benefit the health of the community. Integrating selected state public health data systems can facilitate the monitoring of community health, assist in ongoing trends and detection of emerging threats, and provide information for setting public policy.

In addition, clear expectations exist for information to flow into the UDOH though little information is accessible to those who provide it. Better interagency sharing can also benefit the health of the community, as well as improve the quality of public health data.

Educational. Many consumers use popular media including television and movies as a source for information. It is recommended that the popular media and non-invested groups be included in the discussion of ways to improve awareness of the benefits of consumer-driven health information exchange and educate consumers on the need to maintain continuity of care record (CCR) information in an accessible way. This will facilitate future efforts to exchange CCR information between providers, and drive consumer demand to store CCR data in a centralized repository or bank.

Maintaining a positive relationship between public health and law enforcement requires ongoing communication and education. Law enforcement works with public health in the transport of individuals who may also be communicable disease clients. It is recommended that joint education opportunities exist between public health and law enforcement to reduce requests for unnecessary information and reinforce the need for all officers to use universal precautions against infection.

Technical. The recommended technological solutions address authentication and verification of requesting providers, enabling unique patient identification across Utah payers, identification of a patient's providers from whom information may be requested, and facilitating electronic transmission by ensuring a robust communications infrastructure to all areas of the state.

Using a common identifier for Utah patient care can address access to appropriate patient information. The Utah Health Information Network (UHIN) can work with payers to establish a unique and recognizable member identifier. Participation would be voluntary. Once implemented with success, physicians and providers could adopt the unique identifier moving Utah closer to a single healthcare identifier.

Having the ability to access information implies providing search functionality. There are several op-

tions under consideration including a record locator, an independent bank that would store consumer health information, and a central repository.

Statewide electronic access and electronic connectivity is needed across the state. Many providers and facilities are not operating in an electronic environment. Establishing electronic hubs for access and technical resources is necessary to move e-Health forward.

The authentication and verification of requesting healthcare providers is essential to prevent the inadvertent or inappropriate releases of information. Utah's framework calls for establishing a system or standard protocol for authentication and verification of provider's authority to receive requested information.

Regulatory. Regulatory solutions were not deemed necessary by the SWG. SWG instead viewed added regulatory constraints as a privacy and security benefit. Utah's statutes are not in conflict with HIPAA or other federal regulations. However, conflict exists in Utah privacy or tort law which results in defensive lawyering and protective practices that serve to inhibit the appropriate exchange of healthcare information, electronic and otherwise. In addition, federal solutions involving 42 C.F.R. Part 2 must be amended to allow for the meaningful use of health information in a treatment setting.

Solution Progress. In January 2007 the University of Utah was awarded a Centers for Disease Control (CDC) grant to fund one of four national Centers for Excellence (CoE) in Public Health Informatics. The CoE aims to enhance the use of electronic medical surveillance in detecting and investigating public health threats. As part of this project the CoE is working to address two Utah Department of Health initiatives:

1. Narcotics Project: "Use linked data to enhance public health analysis and practice: Fatal adverse events due to prescription narcotics."

This project will conduct probabilistic linkage of multiple public data streams to drive the investigation of fatal adverse events due to prescription narcotics and is the first of its kind to demonstrate how public health data sets can be linked, at an individual level, to examine narcotic use and related outcomes. Ultimately developing an integrated public health information system, which will boost public health capacity in patient safety, and provide a computer-based surveillance program to promote patient safety within health care systems.

2. Utah Statewide Immunization Information System (USIIS) Project: "Improve the accuracy of probabilistic record matching: Evaluate methods for the efficient use of the USIIS."

This project will evaluate methods to link duplicate, missing, or error-prone data in public health data sets. Using simulated data sets created from the USIIS and UB92, the impact of information content, erroneous and missing data, and database size on false positive and false negative match rates will be measured. This project will also evaluate a Bayesian approach in determining match sets and the impact of these linkage results. Ultimately, this project will result in the ability to do real time linkage of records using a Classification and Regression Tree (CART) approach that allows new immunization records to be linked with previous records based on an analysis of possible matches.

II. State Implementation Planning Process

Implementation Plan Work Group. The implementation plan work group (IPWG), chaired by Barry Nangle, Ph.D., Director UDOH Center for Health Data, was charged with conducting a review of the proposed solutions and drafting a reasonable plan for implementing the recommended solutions. A list of work group members is provided in Table 1.

The workgroup met for six consecutive weeks to review the proposed solutions and identify a practical approach to implementing the recommended solutions. A questionnaire was used to facilitate a discussion around issues including effective practices, planning assumptions, project ownership, project scope, project tasks, and potential barriers. A summative statement as well as the opportunity for work group members to state their final thoughts concluded each solution topic area. A final meeting was held to formulate vision and goal statements and review the draft interim plan.

Table 1. Implementation Work Group

Barry Nangle, PhD, Chair
Director, Center for Health Data
Utah Department of Health

Val J Batemen, MBA, MHA
Executive Vice President
Utah Medical Association

Mark A. Brinton, JD
General Counsel
Utah Medical Association

Kevin M. Coonan, MD
Adjunct Asst. Prof.
(Co-chair, HL7 Emerg. Care Spec. Int. Group)
Div. of Emerg. Medicine, NLM Fellow, Dept. of Medical Informatics
Univ. of Utah School of Medicine

Katie Gorris
Privacy Office
Intermountain Healthcare

Lois Haggard, PhD
Director, Office of Public Health Assessment
Utah Department of Health

A. Richard Melton, DrPH
Deputy Director
Utah Department of Health

Lyle Odendahl, JD
Assistant Attorney General
Utah Department of Health

Jan Root, PhD
Assistant Executive Director
Utah Health Information Network

IV. State Implementation Plans

Note: The following implementation plan represents the IPWG effort to identify possible next steps for implementing the recommended solutions. This work is part of a process intended to further dialogue among stakeholders regarding appropriate secure electronic health information exchange in Utah. This Implementation Plan is a recommendation for Utah's decided course of action.

Vision:	The Privacy and Security Project envisions an effective health care delivery system that provides patients and providers with real-time access to protected health information through a private and secure information network.

Privacy and Security Goals and Objectives

Technical Goal: Advance Utah's electronic infrastructure	To foster opportunities that facilitate the adoption of a unified technological framework that ensures the secure transmission of electronic health information.

Technical-Objective 1	**Process Objective**
Establish a unique member identifier that is initiated in the payer community. Other healthcare entities have the option to adopt the payer-based member identifier. Widespread adoption leads to a patient identifier.	Work within existing stakeholder organizations to assess the functional requirements needed to accurately match members to member records.

Activities	**Responsible Party**	**Resource Requirements**	**Activities Underway**
1. Champion universal member identifier 2. Convene Utah payers/ providers to discuss concept 3. Business Analysis 4. Technical Functional Analysis 5. Garner political/ community will	UHIN Executive Committee Members	Linn Baker and Kerry Stratford to champion and sell the concept to the UHIN Executive Board, payer and provider community UHIN Executive Board UHIN Committees Technical Staff of each participating Payer Organization UHIN Membership	

Technical-Objective 2	Process Objective
Create structures to assist in locating patient-specific health information content (record locator, patient record bank, or other central repository).	Facilitate opportunities to promote the expansion of e-health in Utah.

Activities	Responsible Party	Resource Requirements	Activities Underway
1. Collaborate and promote public/private industry e-health projects and partnerships. 2. Identify a champion to promote concept 3. Conduct Business Analysis 4. Conduct Functional Analysis 5. Garner political/ community will to adopt	Market Solution with Government support. Utah Digital Health Services Commission UDOH, Commerce, Human Services, CIO involvement.	Private payer and provider participation	

Technical-Objective 3	Process Objective
Make available an affordable electronic pipeline to all areas of the state.	Establish partnerships with interested parties (CIO, Telehealth, telecommunications, Ednet). Begin dialogue regarding need for a State Connectivity Gap Analysis - Needs Assessment.

Activities	Responsible Party	Resource Requirements	Activities Underway
1. Identify connectivity and by quality of connection (method, transfer rate) 2. Work towards plan to get high speed quality connection across the state 3. Identify funding and partnership opportunities to meet connectivity needs	The state's technology infrastructure falls under the office of the State Chief Information Officer. Utah Digital Health Services Commission	Interests in advancing interoperable HIE necessitate the development of partnerships/collaborative that include Department of Health, Universities, Public Safety, and telecommunications companies.	Potential funding opportunity. Discussions between CIO, UDOH and Utah Telehealth

Technical-Objective 4	Process Objective
Establish a system or standard protocol for authentication and verification of provider authority to access PHI.	Functional Assessment: Improve and standardize authentication protocol.

Activities	Responsible Party	Resource Requirements	Activities Underway
Consider impact on current authentication process if UHIN adopted: 1. National Provider Indentifier (NPI) 2. Digital signature	UHIN	UHIN Technical Committee	UHIN Executive Committee consideration

Administrative Goal: Sharing of health information	Promote appropriate sharing of health information for public health functions.

Administrative-Objective 1	Process Objective
Integrate state public health clinical data systems to facilitate the monitoring of the health of communities; assist in ongoing analysis of trends and detection of emerging threats; and provide information for setting health policy.	Promote change in attitudes to support policy of sharing from Executive Management Team; Request the UDOH NEDSS Policy Committee consider drafting protocol for sharing clinical data across public health programs; Strategic plan to integrate UDOH clinical data systems.

Activities	Responsible Party	Resource Requirements	Activities Underway
1. Secure “buy-in” to the data sharing proposition 2. Reiterate the need to share 3. Move forward in the process for strategic system development 4. Define scope for appropriate sharing	UDOH Executive Management Team (EMT) UDOH Policy Committee Information Technology Coordinating Council (ITCC)/ Services (DTS)		Centers for Excellence/ UDOH awarded CDC grant

Administrative-Objective 1 (Continued)			
Activities	**Responsible Party**	**Resource Requirements**	**Activities Underway**
5. Establish limits and role-based access 6. Draft plan/ formal protocol 7. System development support	Department of Technology		
Administrative-Objective 2		**Process Objective**	
Establish general protocols for first responders and what information can be shared when given a response situation.		Identify information needs of first responders.	
Activities	**Responsible Party**	**Resource Requirements**	**Activities Underway**
Convene statewide representative group Define data needs Identify barriers/access issues	UDOH Emergency Management System	Legal Analysis, Fire, EMS, Peace Officer, etc.	
Education Goal: Raise Awareness/ Education	Raise consumer awareness of the benefits of access and uses of personal health information: Communicate with law enforcement the risks and realities of communicable disease encounters.		
Education-Objective 1		**Process Objective**	
Educate consumer about the benefits to accessible health information.		Involve neutral (noncompetitive) and consumer organizations in the projects.	

Activities	Responsible Party	Resource Requirements	Activities Underway
1. Create an environment of consumer engagement. 2. Create a simple and believable message that is delivered in a variety of media outlets. 3. Provide consumers with greater access to their own health information.	Involve neutral organizations (no competitive market interest) focused on educating the consumer. Consumer Reports/ News Media Reporter/ Consumer education groups representing populations with immediate benefit AARP, ADA, Advocates for poor, chronic care condition patients.		

Education-Objective 2	Process Objective
Conduct joint training events with law enforcement and public health.	Regular communication and engagement between law enforcement and public health.

Activities	Responsible Party	Resource Requirements	Activities Underway
1. Develop a "Train the Trainer" model. State Department of Health to train local public health departments. Each local public health department to work with the local first responders in their area/ community. 2. Request partnerships with the Utah College of Emergency Physicians (UCEP) to help with conducting	EMS at UDOH – Paul Patrick (Lead) Include any post certified staff, law enforcement, Fire, Highway Patrol, Sheriffs, Immigration, and Forest Ranger.	UDOH, EMS, UCEP, law enforcement, local health department	

Regulatory Goal: Facilitate appropriate HIE	Develop guidance to facilitate electronic HIE while preserving the privacy and security of the individual.

Regulatory-Objective 1		Process Objective	
Harmonize legal, technical and professional standards that restrict the appropriate exchange of health information.		Explore regulatory options to ensure privacy and security of health information that facilitates appropriate exchange in an electronic environment.	
Activities	**Responsible Party**	**Resource Requirements**	**Activities Underway**
Consideration of the following for "model legislation" as it relates to the development of Utah's electronic HIE inftrastructure: 1. Standard patient authorization/consent 2. Ownership of data 3. Data standards/ communication standards 4. Intra- and interstate exchange agreements and protocols 5. Tort reform	Utah Digital Health Services Commission UDOH, Barry Nangle (Lead)		

V. Multi-State Implementation Plan

Utah does not have formal agreements or protocols that govern interstate cooperation or sharing of health information in situations that do not rise to the level of federal emergencies. Primary barriers to interstate agreements for the exchange of health information are license portability, physician authentication/verification and authorization.

Utah was the first state to participate in the Nursing Regulation Interstate Compact Act (SB 146) statutorily recognizing the concept of the mutual recognition of nursing licenses.[2] Utah's Emergency Medical Services System Act allows provides for reciprocity of emergency medical service personnel through an application process.

Recently the National Conference of Commissioners on Uniform State Laws (NCCUSL) comprised of more than 300 lawyers, judges and law professors, finalized the Uniform Emergency Volunteer Health Practitioners Act. The purpose of the act is to establish a system to quickly and efficiently facilitate the deployment and use of licensed practitioners to provide health and veterinary services in response to declared incidents of disasters and emergencies.

ENDNOTES

[1]Wechsler, J. June 2006. Executive Management . http://www.managedhealthcareexecutive.com/mhe/article/articleDetail.jsp?id=329909

[2] Nurse Licensure Compact (NLC) Implementation. National Council of State Board of Nursing. https://www.ncsbn.org/158.htm